C8650-4

Volume 62, Number 10
October 1984

09035 1984301 W 3 2005
SUITE 800 COPY # 1
CONGRESSIONAL INFO SERVIC D
4520 EAST WEST HWY STE 800
BETHESDA MD 20814

BEST AVAILABLE COPY

Electric Light & Power

THE NEWS MAGAZINE OF ELECTRIC UTILITY MANAGEMENT AND TECHNOLOGY

© TECHNICAL PUBLISHING

WPPSS signs accord with BPA to forestall default

Rep. Dingell hits further BPA 'entanglements' with WPPSS

PORTLAND, OR—The Washington Public Power Supply System and the Bonneville Power Administration have entered into an agreement to possibly forestall supply system bankruptcy and maintain the three remaining nuclear units as viable generating resources.

The accord is an attempt to keep some type of institutional relationship alive between the two parties in the event that the so-called net billing agreements, now under legal attack in the courts, are rendered invalid.

The Ninth Circuit Court for several months has been considering a suit questioning the legality of BPA's net billing program. If it rules that the Northwest utility participants had no authority to enter into net billing agreements with BPA, the supply system would be pushed into a nosedive toward default on $6 billion invested in the three nuclear units.

Under such a court ruling, with the utility participants no longer obligated to meet their contractual stipulations, WPPSS would quickly run out of money, says WPPSS spokesman John Britton. It would not be able to continue to operate WNP-2, which just recently became operational, nor would it be able to meet its debt obligations for WNP-1 and WNP-3, which currently are in "mothballs."

The "assignment agreements" are an attempt to circumvent these events.

The attack on the net billing agreements is being spearheaded by the Springfield (Oregon) Utility Board. With other plantiffs, the board is arguing before the courts that Northwest utilities had no authority to enter into the net billing agreements and therefore they are not bound to continue their obligations under them.

This is essentially the same argument that was accepted by the Washington and Oregon courts with respect to WPPSS nuclear units 4 and 5, and that precipitated supply system default on over $2 billion in outstanding securities.

In the present case, however, WPPSS and BPA have one strong element in their favor: the validity of the net billing agreements with respect to nuclear units 1, 2, and 3 was upheld last year in federal district court. The effort to establish assignment agreements is viewed as a contingency plan in the event the Ninth Circuit Court invalidates the existing billing accords.

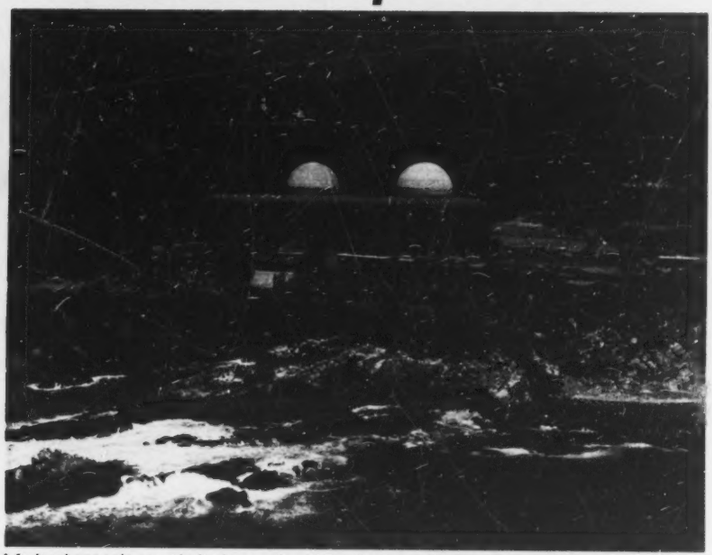
'Net billings' are complex

The net billing agreements are complex arrangements that institutionally relate WPPSS, BPA, and over 100 Northwest utility participants in the construction, operation, and power distribution of WNP-1, WNP-2, and WNP-3. Under the agreements, each utility purchases a share of each plant from the supply system, which, as a joint operating agency, assumes responsibility for financing and constructing the plants. Each utility would then assign its allocated output to BPA.

By blending the costs of this new,

Continued on page 10

Diablo start-up blocked



A federal appeals court halted operation of Pacific Gas & Electric Company's $5.1 billion Diablo Canyon nuclear plant on August 17, just hours after its full power license went into effect. The halt will last at least until November, when the appeals court will hold a hearing to review claims of the plant's opponents. In the meantime, PG&E will be allowed to operate the plant at low power testing levels. The utility said it was disappointed with the ruling by the U.S. Court of Appeals for the District of Columbia and would file an appeal. Joel Reynolds, a lawyer for the Center for Law in the Public Interest, representing groups opposing the plant, said the court's action was an indication of all the claims made by the group before the Nuclear Regulatory Commission in the last 15 years. PG&E also asked the U.S. Supreme Court to hear the case, but the Court refused. PG&E Chairman and Chief Executive Officer Frederick W. Mielke Jr. said legal and other delays have caused weekly operating costs of $16.1 million. Mielke said the utility has asked the federal appeals court to speed up hearings on the injunction.

PUC 'bias' delays PSNH financing

MANCHESTER, NH—The New Hampshire Supreme Court, ruling that the chairman of the state's Public Utilities Commission made biased public statements regarding the Seabrook nuclear plant and Public Service of New Hampshire, has overturned commission approval of the utility's $425 million financing plan.

Public Service of New Hampshire had been poised to issue securities in order to generate needed cash, but the court's ruling temporarily has thwarted the plan, leaving the company in an increasingly difficult cash flow situation.

On August 28, the New Hampshire Public Utilities Commission approved PSNH's proposal to issue up to $425 million in securities to cover the company's cash needs over the next two years. However, responding to an appeal by the Seacoast Antipollution League, the New Hampshire Supreme Court two days later suspended the approval, pending review of two contentions put forward by intervenors.

The league claimed that because of remarks made in a recent speech, the PUC chairman should have disqualified himself from participating in the agency's decision on the proposed PSNH financing plan. The league further claimed that the PUC unjustly narrowed the scope of the financing plan review.

On September 7, the state's high court agreed that the speech at the very least gave the appearance of bias and said that although the PUC's nar-

Continued on page 11

Broad-based contributions aren't political, EEI says

Dan Utroska
Associate Editor

Investor-owned electric companies that are dues-paying members of the Edison Electric Institute (EEI) are indirectly supporting a host of local and national organizations such as the Business-Industry Political Action Committee, the Chamber of Commerce of the United States, the Committee to Elect Democratic Governors, the Congressional Black Caucus Foundation, and the Congressional Hispanic Caucus.

Details of the wide-ranging financial support given to these groups by EEI is contained in a June 29, 1984 document prepared by the institute in response to questions posed by the National Association of Regulatory Utility Commissioners (NARUC) as part of the association's on-going investigation of EEI revenues and expenditures. *EL&P* has obtained a copy of this report which, together with testimony of an EEI official in a state rate proceeding, reveals that electricity consumers, through utility dues to EEI, are contributing to a variety of groups and organizations that may be engaged in political activities and lobbying.

Over a five-year period from 1979 to 1983, EEI contributed $3.5 million in cash to such organizations. This does not include "in-kind" (e.g., staff office space, overhead, etc.) contributions to these same groups. As a means of reference, $3.5 million is 3.8 percent of EEI's total dues spent over the period, an institute spokesman said.

The remaining EEI dues expenditures go for collecting, developing, analyzing, and disseminating information on the generation, sale and use of electricity, the EEI spokesman said. This includes training programs for member companies, data collection and the composition of studies available to member companies and the public. It also includes analyses of pending legislation for member companies.

Since EEI revealed the extent of its donations to these groups and organizations, questions are being raised as to what is and what is not a political contribution. According to federal law, it is illegal for a corporation to make a contribution or expenditure in connection with any federal election.

EEI maintains that none of the contributions detailed in its June 29, 1984 response to NARUC violate definitions as described in federal election laws.

Also at issue now is that fact that EEI's detailed list of organizational expenditures shows that, whether political or not, EEI is making dona-

Continued on page 19

Foreign Power Briefs

• **The People's Republic of China** and the United States have signed a major hydropower agreement. U.S. Secretary of the Interior William Clark said the agreement, signed on August 3, calls for the Bureau of Reclamation to provide technical and consulting services over the next five years in the design of the 13,000 MW Three Gorges Project on the Yangtse River. China will be responsible for the construction and operation of the dam, as well as reimbursement for all U.S. technical and consulting services. When completed, the Three Gorges Project will be almost as high as the Hoover Dam and more than a thousand feet longer than the 10,000 MW Grand Coulee Dam. Interior Secretary Clark said, "We are pleased to be entering this landmark agreement with the People's Republic of China. We expect both countries to derive benefits from this cooperative effort."

• **Mitsubishi Heavy Industries Ltd., of Tokyo,** has won a contract to supply a turbine generator for Pacific Gas & Electric Company's proposed geothermal plant at The Geysers site, near San Francisco. PG&E said it will pay approximately $10 million for the generator, which is expected to be delivered in March 1987. The utility hopes to begin construction of the $216 million, 151,000-kW plant in May 1985 and start operation in September 1988.

• **Mitsubishi and Westinghouse Electric Corporation** have extended a technology transfer agreement that will enable the Japanese concern to make use of Westinghouse innovations in commercial nuclear power technology for generating electricity through 1996. The new agreement means Mitsubishi will have access to technology earlier in the development process than under earlier agreements, said Westinghouse. In return, the American company will receive Mitsubishi technology, including research and development information and operating performance data from Japanese nuclear plants.

• **Sweden's** Studsvik Energiteknik has sold a license for its circulating fluidized bed combustor to Babcock & Wilcox USA. Studsvik said its combustor has excellent fuel flexibility, and low carbon monoxide, nitrous oxide and hydrocarbons emissions.

• **Deutsches Atomforum**, a West German nuclear industry group, reports that atomic power accounted for 21 percent of the electricity fed into the country's power grid in 1983, unchanged from 1982. The group said nuclear plants generated 65.9 billion killowatthours of electricity last year, up five percent from 1982.

• **The Ismailia Power Station** in Abu Sultan, Egypt, will get a fourth steam generator. Foster Wheeler Energy Corporation said it has received an $11 million contract from General Electric Company's International Projects Department to design and fabricate the steam generator for completion in 1986. Capacity of the generator will be 164 MW.

• **Korea Power Engineering Company (KOPEC)** has awarded a contract to Burns and Roe, Inc., for consulting services for two new nuclear plants in South Korea. The new units, Korea-11 and -12, will be in the 900 MW range. The site is undetermined. Burns and Roe said it will provide engineering and design services, including advisory assistance relating to contracts with potential suppliers of the two nuclear units.

In This Issue

The likely energy policies of Ronald Reagan and Walter Mondale are examined in a special election preview. 3

Editorial 4

Calendar 13

An aging coal-fired power plant was modernized with a new distributed digital control system.**G** 16

PCB transformers are being replaced by many utilities even though there is no formal requirement, yet.**T/D** 26

A sulfur-dioxide scrubber additive has improved performance in several demonstrations but is slow to catch on with utilities.**G** 35

Readers' Service 39

New Products 43

New Literature 45

Regulatory Review 47

Management Methods 50

EL&P readers whose responsibilities include both Generation and Transmission/Distribution receive both technology sections. Other readers receive the technology section that applies to their respective area of responsibility. The Generation edition is indicated by a single dot (•) in the upper right corner of page 1; the T/D edition carries two dots (••). All readers receive EL&P's industry news section.

TVA cancels four units

KNOXVILLE, TN—Despite an investment of $2.7 billion, the Tennessee Valley Authority cancelled four nuclear reactors in late August.

The TVA board accepted a staff recommendation to cancel the two-unit Hartsville A project and the two-unit Yellow Creek plant. Construction had been deferred on all four units in 1982.

Between 1966 and 1975, the agency approved plans to build 17 nuclear units. TVA now has cancelled eight nuclear units. Four are still under construction and five are operating.

TVA Director John B. Waters said, "The Tennessee Valley Authority does not need the two Hartsville and the two Yellow Creek nuclear units." He said the units are unaffordable.

Sufficient capacity

Waters said he is confident that TVA has sufficient capacity to "get this region comfortably through the mid-1990s."

When first announced in 1974, TVA estimated it would take $800 million to complete Hartsville A. The most recent estimate to finish the plant was $5 billion. Hartsville A-1 was 44 percent finished and unit 2 was 34 percent complete.

Yellow Creek was first announced in 1975 at a cost of $1.9 billion. TVA recently estimated it would cost $9.6 billion to finish Yellow Creek.

Said Waters, "...the total cost of the entire TVA power system now in operation is less than $10 billion. That says a lot in itself."

Yellow Creek-1 was 35 percent complete and unit 2 was 34 percent finished.

Hugh Parris, TVA manager of power, said in a staff review of the plants that it was in the best interest of the ratepayers to cancel the units.

Too expensive

"In conclusion," wrote Parris, "our study shows that the increasing construction and operating costs of nuclear plants have simply made them too expensive to consider for our future generation requirements."

TVA said that over the next 11 years it will write-off the more than $4 billion spent on the eight cancelled nuclear units.

"The truth of the matter is that, in the '60s and early '70s, the need for new capacity was overestimated," Waters said at the August board meeting, "the cost for new plants was underestimated, and the price the public could and would pay for electricity was misunderstood."

ASLB authorizes Limerick license

PHILADELPHIA—The NRC's Atomic Safety and Licensing Board (ASLB) has authorized the commission to grant a low-power testing license to Philadelphia Electric's Limerick station.

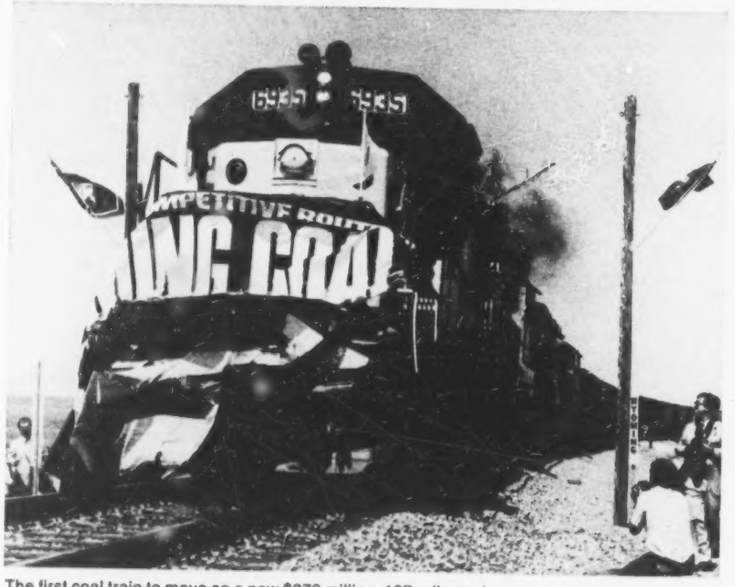
The three-member board said, "Philadelphia Electric Company has fully met its burden of proof on each of the contentions. There is reasonable assurance that the Limerick Generating Station, Units 1 and 2, can be operated without endangering the health and safety of the public, and further that all requirements applicable to these issues under the National Environmental Policy Act have been met."

PE Senior Vice President for Nuclear Power Vincent S. Boyer said, "We at PE do not regard this decision as indicating our job is finished but as an important milestone in the continuing plan to place Limerick Unit 1 into commercial operation to serve our customers."

Fuel loading

The utility expected to load fuel in September. Limerick 1 is expected to enter commercial operation in Spring 1985. Construction on unit 2 was suspended pending commercial operation of unit 1.

Powder River line opens



The first coal train to move on a new $370 million, 107-mile coal route serving Wyoming's Powder River Basin bursts through a banner during August ceremonies at the Wyoming-Nebraska state line. Jointly financed and built by the Chicago & Northwestern Transportation Co. and the Union Pacific System, the new track is expected to increase competition and reduce coal rates for some utilities. The line from Morill, NB to Shawnee, WY connects the rail companies with a line into the Powder River Basin that was built by the Burlington Northern Railroad. C&NW had paid BN to share the line. C&NW and UP say they expect to be hauling more than 35 million tons of coal annually from Wyoming by 1990. (Photo by Union Pacific System)

Editorial

Canadian power imports look good now...but tomorrow?

Ratepayers in New York, New England, Michigan, the upper North Central states and the Pacific Northwest stand to realize savings in their electricity bills as the result of import contracts signed with Canadian utilities. For customers trapped in normally high-cost oil-based generation areas, the prospects seem especially attractive, at least in the short-term. But recent rapid increases in the amount of power imported...and the prospect for further substantial increases over the next five years...is cause for some concern.

In 1983, according to the Department of Energy, almost 40-billion kWh were imported into the U.S., almost solely from Canada (electricity from Mexico represented less than 1 percent of the total kWh imported). The tab for this power in 1983 amounted to about $1-billion. Moreover, DOE is estimating that imports will double by 1990. The Canadian Energy Board, however, estimates that sales to U.S. utilities could increase to 30-times the 1983 total...or $30-billion.

Short-term, there is little question but that current imports make a lot of economic sense for some utilities. Certainly as replacements for potential new high-cost capacity, Canadian kilowatthours are a bargain. Contracts with U.S. utilities also are good for the Canadians, who stand ready to build new capacity in order to serve the growing U.S. appetite for electricity. Manitoba, for example, is currently negotiating a contract with the Western Area Power Administration (WAPA) under which the Canadian utility will develop hydro facilities on the Nelson River and commit 1275 MW of capacity to WAPA for 35 years. The price for the power will be tied to what WAPA would pay for coal to fuel a now deferred power plant. The province of New Brunswick even stands ready to add new nuclear capacity to meet U.S. needs.

In New York and New England, where power costs are the highest in the nation, imports are helping to hold the price line. New York imported about 55 percent of the total electricity brought in, which provided for about 17 percent of its needs. New England imported 15 percent of the total to provide for about 6 percent of its demand for kWh, but has signed several new contracts that will push its dependency higher in future years.

DOE, according to DOE manager of Electricity Import-Export Licensing Garet A. Bornstein, is fearful that longer-term costs may not be as favorable as now. "What looks like a good deal today, we might bemoan in the long-run."

The problem he foresees is that the Northeast is heavily dependent on oil-fired generation. Where the price of imported electricity is related to avoided costs and where the avoided costs are based on oil as the base fuel, future pricing problems could arise. Should there be a disruption in the supply of oil, Bornstein says, it could produce an increase in the price of the fuel...perhaps even a doubling. That would mean, he argued, that any electricity imported under such a contract would effectively be the same as importing oil.

At the same time, Bornstein pointed out, many American utilities, in the midwest for example, have more than adequate supplies and above-normal reserves of coal- and nuclear-based capacity that could be used to economically meet the needs of the Northeast or northern-tier states. Although existing transmission capacities may be insufficient to move large incremental blocks of energy from the Midwest to the Northeast, Bornstein suggests they might be expanded and uprated for less than the cost of new Canadian transmission ties.

Moreover, strengthening transmission ties between Midwest and Northeast utilities, and removing regulatory obstacles to large-scale transfers of electricity, would allow utilities in New York and New England to buy energy from U.S. utilities that already need outlets for their excess capacity, to the mutual benefit of both buyer and seller...and their customers.

Taking advantage of low energy rates for electricity from Canada does make sense so long as the rates remain low and the amount imported remains a small portion of total demand. But long-term, potential pricing problems, to say nothing of national security issues, would seem to suggest that greater domestic cooperation and interregional transfers offer a more beneficial and dependable outlook for the future.

Robert A. Lincicome, Editor-in-Chief

Next: The Electric Utility of the Year

WE files to lower rates $8.1 million

MILWAUKEE—For the second consecutive year, Wisconsin Electric Power Company has filed a request to lower its rates with the Wisconsin Public Service Commission.

The utility asked the commission to approve a decrease in the base electric rate of $8.1 million. Previously, Wisconsin Electric lowered its rates $20.5 million.

Cost-control measures, repurchase of some of the utility's common stock, revised accounting procedures, reductions in the amount earned on funds borrowed for construction and a delay in the startup of Pleasant Prairie Unit 2 were cited by the utility as major reasons for the rate decrease request.

If approved by the PSC, the decrease would be effective January 1, 1985. According to the company, Wisconsin Electric is the only major electric utility to seek a rate reduction in each of the past two years.

WE Chairman Charles McNeer said the company's electric rates are among the lowest in the nation. He said the rates could be a factor in attracting new industries and jobs to Wisconsin.

A year ago McNeer said the utility would strive to "achieve a new era of no rate increases."

EEI sponsors renewable energy issues conference

WASHINGTON, D.C.—The Edison Electric Institute said it will join with the Renewable Energy Institute in sponsoring a conference on environmental and regulatory issues associated with renewable energy technologies.

The conference, *Utilities and Renewable Energy: Environmental and Regulatory Issues*, will be held Nov. 12-14 in Boston.

EEI said the purpose of the conference is to identify and discuss the major environmental and regulatory issues associated with the development of renewable energy technologies for electric power production.

Attention will be focused on small-scale hydro, biomass, refuse-to-energy, solar, wind, photovoltaic and cogeneration technologies.

For more information, call Richard Loughery, EEI, (202) 828-7626.

Com Ed retires Dresden

CHICAGO—Commonwealth Edison announced that it will retire its Dresden unit 1 which, when put on line in 1960, was the first privately financed nuclear plant in the world.

The utility said the 200-MW unit, shut down since 1978, is being retired because it would cost $300 million to bring it into compliance with NRC's post-TMI regulations, an "impractical" investment.

A long-planned chemical decontamination program for the reactor, the first for a large commercial reactor, was slated to be completed in late September. Following chemical cleaning Com Ed plans to mothball the unit for the useful life of the site, which includes two other units.

CEO pay lower at public utilities: new survey

NEW YORK—A new survey of 408 utilities shows that average base salaries of chief executive officers of publicly owned utilities are considerably lower than those of CEOs in investor-owned utilities.

Survey results

The Towers, Perrin, Forster & Crosby survey said CEOs of investor-owned utilities of between $50 and $200 million in revenues make $107,000 a year. CEOs in publicly-owned utilities earn $61,700.

Corrections

An article in the Oct. *EL&P* on p. 36 "PR execs say state regulator's intrude in utility affairs", incorrectly reported that public relations executives said their state regulatory commissions have always intruded into management functions. The sentence should have read, "The executives told Bogart, 15 to 2, that their state commissions have not intruded into traditional management functions in the past, but will do so increasingly in the future." *EL&P* was given incorrect information.

The special report on operations at the top 100 investor-owned electric utilities in the August, 1984 issue contained two errors. The change in oil consumption for Baltimore Gas & Electric from 1982 to 1983 included in the table on page 8 should have read -24 percent, not +24 percent. The generating capacity in the fossil category reported for Florida Power & Light in the table on page 10 should have been 8632 MW, a decline of 147 MW from the previous year, not 8186 MW, down 593 MW, according to J.R. Sullivan of FP&L's system planning department.

Electric Light & Power

EL&P Staff

Vice President and Group Publisher
Robert J. (Duke) Kiesel

Sales Manager
Arthur L. Rice

Editor-in-Chief
Robert A. Lincicome

Editorial Staff
Robert W. Smock, Managing Editor
Dan Utroska, Associate Editor
Donald F. Minner, Jr., Assistant Editor
Dianne Wilson, Editorial Assistant
Maureen Schade, Editorial Assistant
Elisa Girard, Art Director

Circulation
Joseph J. Zaccaria, Director

Contributing Editors
William Kenworthy, Legal/Regulatory
Ted Pollock, Management

Production
Judith S. Schwabe, Regional Director
Laura Smith, Manager

Marketing Services
Margaret Shake, Promotion Manager

Research
Susan Humes, Associate Research Manager

Editorial Advisory Board
H. L. Culbreath, Tampa Electric Co.
Clayton K. Larson, Northern States Power Co.
Edward A. Myers, Jr., Southern California Edison Co.
John T. Stiefel, Stiefel Associates, Inc.

Technical Publishing
a company of The Dun & Bradstreet Corporation
Barrington, IL 60010 • (312) 381-1840

ELECTRIC LIGHT & POWER (USPS 858-860) is published monthly. © copyright 1984, by Technical Publishing a division of Dun-Donnelley Publishing Corporation, a company of the Dun & Bradstreet Corporation—all rights reserved. John K. Abely, President; Robert L. Dickson, Executive Vice President; John R. Emery, Senior Vice President; Robert J. (Duke) Kiesel, Vice President and Group Publisher. Editorial and Executives offices: 1301 S. Grove Ave., P.O. Box 1030, Barrington, IL 60010. Phone (312)381-1840. Distributed to executives and engineers in U.S. electric utilities and consulting engineering firms. Second-class postage paid at Barrington, IL 60010 and at additional mailing office. To all others there is a subscription charge of $38 per year (U.S.) $46 (Canada), and $66 foreign. ($108 foreign air mail, as of January 1, 1985). Single copy prices $4.00 + Postage (U.S.) $5.00 + Postage (Canada), and $7 + Postage (Foreign). Postmaster: Send address change to ELECTRIC LIGHT & POWER, P.O. Box 1030, Barrington, IL 60010.

ABP
BPA

Advertiser and advertising agency assume liability for all contents (including text representation and illustrations) of advertisements printed, and also assume responsibility for any claims arising therefrom made against the publisher. It is the advertiser's or agency's responsibility to obtain appropriate releases on any items or individuals pictured in the advertisement.